REMARKS

Claims 1-13, 28 and 30-31 are pending in this application.

I. Claim Rejection under 35 U.S.C. §112

The Office Action rejects claims 1-2, 4-8, 10, 14, and 30-31[1] under 35 U.S.C. §112, second paragraph, as indefinite. This rejection is respectfully traversed.

Regarding claim 1, the Office Action alleges the phrase "resistance value" is unclear, even though the Office Action admits that the specification supports the phrase "resistance value," because there is more than one resistance value shown in Fig. 8.

The Office Action appears to overlook that claim 1 recites, "a resistance value from an output end of the voltage source to a drive end of the light emitting element" (emphasis added). Such a resistance is shown clearly, for example, as the resistance from the output of operational amplifier 235 to the input of LED LD in Fig. 9.

Further regarding claim 1, the Office Action alleges that "internal resistance" is unclear, even though the Office Action admits that the specification supports the recited "internal resistance," and alleges this internal resistance is not shown. Applicant notes all electronic components generally have an internal resistance. This is clearly understood by one of ordinary skill in the art. Thus, for example, LED LD1 in Fig. 8 inherently has an internal resistance which is inherently shown with it. If the Examiner maintains this rejection, the Examiner should respond to Applicant's arguments (made here and in the previous response), rather than making a conclusory statement.

For the foregoing reasons, Applicant respectfully requests withdrawal of the rejection.

II. Claim Rejection under 35 U.S.C. §102

The Office Action rejects claims 1, 4, 6, and 7 under 35 U.S.C. §102(b) over Japanese

[1] The Office Action additionally indicates claims 32-33 are rejected in this rejection. However, claims 32-33 have been canceled.

Patent No. Hei 09-264780 to Ema et al. (Ema).[2] This rejection is respectfully traversed.

Ema fails to discuss a resistance value from an output end of reference voltage source 16 to an input end of light emitting element 12. Although the Office Action alleges that the reference sign 15a denotes a resistance (see page 4 of the Office Action), this is incorrect because reference sign 15a in Ema merely denotes an error signal.

If it is assumed that an error amplifier circuit 15 of Ema is an ideal amplifier, the input impedance (input resistance) of the error amplifier circuit 15 is infinite. As shown in Fig. 1 of Ema, the error amplifier circuit 15 is disposed between the reference voltage source 16 and the light emitting element 12. Therefore, the resistance value between the reference voltage source 16 and the light emitting element 12 is infinite.

It is recognized that the "ideal amplifier" is hypothetical, and, thus, there is no actual amplifier having an infinite input impedance (infinite input resistance). However, this model is used by those of ordinary skill in the art because an amplifier such as an operational amplifier has quite large input impedance, for example, a few megaohms. Therefore, it is commonly known to one skilled in the art that an input impedance of an amplifier is larger than an internal resistance of a light emitting element. Accordingly, the Office Action's assertion that Ema discloses the feature "a resistance value from an output end of the voltage source to a drive end of the light emitting element is smaller than an internal resistance value of the light emitting element" is technically incorrect.

For the foregoing reasons, Applicant respectfully requests withdrawal of the rejection.

III. Claim Rejection under 35 U.S.C. §103

The Office Action rejects claims 6 and 7 under 35 U.S.C. §103(a) over Ema in view of U.S. Patent No. 6,510,168 to Kikuchi. This rejection is respectfully traversed.

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[2] The Office Action cites this reference as JP 08-077510, which is the application number.

Kikuchi discloses a laser drive circuit 1 having two voltage inputs V_{in1} and V_{in2} which control turn switch 7 to turn Laser Diode on or off (column 3, lines 19-39). Kikuchi fails to disclose two voltage sources able to be alternatively supplied to a light emitting element as alleged by the Office Action. Thus, claim 6 is patentable over Ema in view of Kikuchi.

For the foregoing reasons, Applicant respectfully requests withdrawal of the rejection.

IV. Allowed Claims

The Applicant appreciates the Office Action's indication that claims 2-3, 5, 8-13 and 28 would be allowable if rewritten in independent form and that claims 30-31 are allowed.

V. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-13, 28 and 30-31 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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